

INNOVATION VOUCHERS INITIATIVE

Waterford Institute of Technology
Waterford Institute of Technology, Cork Road, Waterford

DIRECTORY OF SKILLS AND EXPERTISE



College Contact Point for Innovation Voucher Enquires:

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Department/Unit	Specific services offered	Contact Name	Telephone	Email
Telecommunications Software and Systems Group (TSSG)	<ul style="list-style-type: none">• System, process and technology evaluation• Technology market analysis• System usability analysis• Technology development roadmaps• Software development• Website optimisation• VOIP system evaluation, design and implementation• Mobile technologies and applications	As Above	As Above	As Above
Flexible Wireless Research Group	<ul style="list-style-type: none">• Fixed and mobile wireless communications• Alternative energy system design and control• Remote system control• Electronic system design and software integration	As Above	As Above	As Above

Microelectronics & Systems	<ul style="list-style-type: none"> • Research and design of custom, integrated circuits (ICs) • Sensing technologies • Signal processing employing low power and low voltage circuit techniques. • Data conversion and analogue signal processing. • Embedded systems • 	As Above	As Above	As Above
Engineering	<ul style="list-style-type: none"> • Information systems • Business process analysis • System evaluation • Software-hardware integration • Mobile applications • Parallel computing 	As Above	As Above	As Above
Microelectronics and Systems Research Group	<ul style="list-style-type: none"> • Sensor design (admittance, impedance, optical, etc) for temperature, pressure, level, proximity sensing, etc. • Analog signal conditioning circuit design • Digital signal processing • Embedded system design using latest generation of microcontrollers • Programmable system on chip • Wireless & remote sensor design • Small area wireless network • PCB and prototype design • General electronic circuit design 	As Above	As Above	As Above
Computer Science	<ul style="list-style-type: none"> • Specialised internet search • Multimedia applications 	As Above	As Above	As Above
Business	<ul style="list-style-type: none"> • Market analysis • Focus groups and customer surveys • Idea generation processes • Creativity audit • Innovation and knowledge transfer management 	As Above	As Above	As Above

	<ul style="list-style-type: none"> • Management capability audit and development • Business planning and strategic awareness • Customer relationship management • Change management 			
Optics Research Group	<ul style="list-style-type: none"> • Expertise in areas of optics and photonics including high brightness sources, Raman fibre devices, quantum dot dynamics, erbium amplifiers and Bragg sensors. 	As Above	As Above	As Above
Construction & Civil Engineering	<ul style="list-style-type: none"> • Construction processes and products 	As Above	As Above	As Above
Applied Materials Research	<ul style="list-style-type: none"> • X-ray tomography: Non-destructive 3-D examination of materials and products • Microwave processing and remediation of materials • Mathematical modeling of magnetically targeted nanoparticles in biomedicine 	As Above	As Above	As Above
Pharmaceutical & Molecular Biotechnology Research Centre (PMBRC)	<ul style="list-style-type: none"> • Core competencies in separation science, polymer science, molecular biotechnology, nanotechnology and biomedical science. • State-of-the-art 700m2 laboratory facility • Expertise in chemical, pharmaceutical and biomedical research • Links to international experts and specialists in the Pharma, Biopharma & Biotech sectors. • Associated research groups include: <ul style="list-style-type: none"> ○ Biofuel Research Cluster ○ Biomedical Research 	As Above	As Above	As Above

	<ul style="list-style-type: none"> Cluster ○ Polymer Mediated Sensing Research Group ○ Listeria Research Group ○ Molecular Biology Research Group ○ Nanotechnology Research Group ○ Separation Science Research Group ○ Surface Science Research Group 			
Eco-Innovation Research Centre (EIRC)	<ul style="list-style-type: none"> • Development of new products, technologies, services and processes that contribute to sustainable development • Analytical Capabilities: <ul style="list-style-type: none"> ○ Microwave Digestion for Heavy Metal Analysis ○ Controlled Environmental Testing – Temperature & Light ○ Surface Characterisation – SEM, AFM, Nitrogen Sorption Analysis, Particle Size Analysis ○ Separation Science – GC/MS, LC/MS, Rapid Resolution LC, CE ○ Spectroscopy – NMR, FTIR (including FTIR Microscopy), UV/Vis, Inductively Coupled Plasma (ICP-OES), AAS ○ DNA Sequencer, Real-time PCR • Associated research groups include: 	As Above	As Above	As Above

	<ul style="list-style-type: none">○ Estuarine Research Group (ERG) Bioremediation of toxic heavy metals using seaweed biomass; Environmental biomonitoring; Isolation of bioactive compounds from sustainable marine sources○ Forestry Research Group (FRG) – Wood energy; Vegetation management; Invasive species management; Traditional & novel control methods, including biological control○ Molecular Ecology Research Group (MERG) – Development of novel DNA identification techniques for mammals○ Sustainable Agriculture Research Group (SARG) - Biofuel research; Agri-environmental management			
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